AMENDMENTS TO THE CLAIMS

Please amend the claims as shown below. This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims

Claims 1-23 (canceled).

Claim 24 (currently amended): A method of treatment of human liver, breast, colon or rectal malignancies, comprising administering to a subject in need thereof a modified, full-length ~~isolated and purified~~ recombinant human arginase I polypeptide of 80-100% purity ~~to a patient~~, which is covalently linked to at least one polyethylene glycol (PEG) molecule ~~wherein said arginase comprising chemical modification resulting in a specific activity of at least 336 I.U./mg, a purity of 80-100% and an extended half-life for at least 3 days~~.

Claims 25-26 (canceled).

Claim 27 (currently amended): The method of treatment according to Claim 24, wherein ~~said~~ the modified, full-length recombinant human arginase I polypeptide has an extended half-life of at least [[6]] 3 days.

Claim 28 (currently amended): A method of treatment of human liver, breast, colon or rectal malignancies, comprising administering to a subject in need thereof a modified, full-length recombinant human arginase I polypeptide, which is covalently linked to at least one polyethylene glycol (PEG) molecule, ~~malignancies of a human patient comprising administering a pharmaceutical composition~~ wherein the administration of the modified, full-length recombinant human arginase I polypeptide ~~that~~ reduces the physiological arginine level in ~~said~~ the subject ~~patient~~ to below 10 μM for at least 3 days.

Claim 29-37 (canceled).

Claim 38 (new): The method of claim 24, wherein the modified, full-length recombinant human arginase I polypeptide has an amino acid sequence encoded by a nucleic acid of SEQ ID NO. 8.

Claim 39 (new): The method of claim 24, wherein the modified, full-length recombinant human arginase I polypeptide has the amino acid sequence of SEQ ID NO. 9.

Claim 40 (new): The method of claim 24, wherein the modified, full-length recombinant human arginase I polypeptide has an amino acid sequence encoded by a nucleic acid of SEQ. ID NO. 2.

Claim 41 (new): The method of treatment according to claim 24, wherein the modified, full-length recombinant human arginase I polypeptide has the amino acid sequence SEQ. ID NO. 3.

Claim 42 (new): The method of treatment according to claim 24, wherein the wherein the modified, full-length recombinant human arginase I polypeptide has an extended half-life relative to the half-life of an unmodified full-length recombinant human arginase I.

Claim 43 (new): The method of treatment according to claim 24, wherein the administration of the modified, full-length recombinant human arginase I polypeptide reduces the physiological arginine level in the subject to below 10 μM for at least 3 days.

Claim 44 (new): The method of treatment according to claim 28, wherein the wherein the modified, full-length recombinant human arginase I polypeptide has a second phase half-life of at least about 21 days *in vivo*.

Claim 45 (new): A method of treatment of human liver, breast, colon or rectal malignancies, comprising administering to a subject in need thereof a modified, full-length recombinant human arginase I polypeptide comprising the amino acid sequence of SEQ ID NO: 9 which is of 80-100% purity, covalently linked to at least one polyethylene glycol (PEG) molecule, and has an extended half-life of at least 3 days.

Claim 46 (new): The method of treatment according to claim 45, wherein the administration of the modified, full-length recombinant human arginase I polypeptide reduces the physiological arginine level in the subject to below 10 μM for at least 3 days.